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ABSTRACT

Does homework increase academic achievement? The best answer, in 1986, is that large-scale correlational studies at the secondary level suggest a strong, positive relationship between amount of homework and academic achievement. Results are less clear at the elementary level, but the weight of evidence is positive. At both elementary and secondary levels, doing homework is associated with pupils' liking for a subject. Comparative figures indicate that, at the secondary level, Toronto students are doing fewer hours/minutes of homework per week than are students in most other countries. Surveys done in the United States suggest that most homework assignments are of a practice variety. Individualized and more varied assignments are desirable. Little summative research on the effectiveness of study hall exists, but supervised study at school might reasonably be expected to be at least as effective as unsupervised home study. Other alternatives which have been positively evaluated include homework hot lines and parent-training programs. Because of the influence parents can exert for the good of their children, educators should recognize parent involvement as a powerful tool for advancing children's readiness and ability to learn, especially in the area of reading. Schools should involve both teachers and parents in the formulation of homework policies. A five-page list of references concludes the document. (RH)

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HOMEWORK

Suzanne Ziegler

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EXECUTIVE SUMMARY *

1. Homework policy, like so many aspects of schooling, often reflects the temper of the times more than the results of a well-thought out, information-based strategy. It is subject to the same pendulum swings that have been typical of so much of the modern history of educational philosophy.

2. The most frequently asked question about homework is whether it increases learning. It is not easily answered, and has often been badly answered. Recent research is supportive of the hypothesis that doing homework does increase learning. The bulk of this research has been done in secondary schools.

3. North American secondary students do not do very much homework, by international standards. They also put in many more hours watching television than doing homework.

4.(a) The most common kind of homework assignment involves practicing a skill already taught. While practice is one valid purpose which homework can serve, it does not extend what has been taught; it does not develop independent thinking or creativity; and it usually makes no allowance for individual differences in learning speed or prior achievement. All of these worthy ends are far better served by assignments which involve the pupil her/himself in planning and/or organizing the assignments, and which may allow her/him to use resources which are not available in the school. The difference between resources outside and inside of school is a worthy consideration in differentiating between what is appropriate classwork and what is appropriate homework.

(b) People learn what is reinforced. Teacher feedback (marks, comments) is reinforcement. Homework assignments which are marked or commented on frequently and with little delay will be more effective than homework which is not reinforced - even if it is more frequent.

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* Points 1-6 correspond to Chapters I - IV in the report.

(c) Students in lower ability streams and groups tend to be given less homework than those rated more able. This does not advantage the less able, who are equally able to benefit from well-designed homework assignments.

(d) Supervised study, as in study halls, may benefit pupils, by putting a better use to their time during breaks in and at the end of the school day. Assistance in understanding assignments can be given by adult volunteers or peers.

5. Parents (especially of children beyond primary age) want and expect homework, as evidence of the school's seriousness of purpose, and also as their window into their children's daily life at school.

Educators are well aware of the very strong influence of home factors on the degree to which children are able to realize educational opportunities.

The eagerness of most parents to see their children do well in school, coupled with their profound influence on that happening, leads to a realization that schools should be educating parents in how to help their children. Good homework assignments can do this, especially at the elementary level, by building in the human and non-human resources of the home. Children's work can demand some parent involvement.

In addition, many kinds of relatively simple parent training programs are successful in making parents more effective home teachers. Such interventions, which can make the home a strong reinforcer of school, can be extremely cost efficient, because their pay off is so great.

6. Parents and students want and need clearly stated homework policies, and their input into such policies is necessary if they are to comply with them. Agreed-upon amounts of homework, school homework timetables, and clearly stated objectives for homework are needed. Statements such as "the purpose of homework is to encourage independent work habits" are of no use unless they are seriously meant, and homework assignments are clearly designed to serve that purpose.

HOMEWORK: A LITTLE HISTORY

1. In the U.S. and the U.K

"There is a perfect unanimity of opinion as to the uselessness of home study . . . educators advocate its abolition . . . all along the intelligent educational line exists this absolute unanimity of opinion as to the fallacy of the home study practice." (Ladies Home Journal, 1913)

The evils of homework, according to the Ladies' Home Journal of 1913 were social, psychological, and even physiological. One physician consulted by the editors explained that evening study results in brain congestion, as the blood needed for proper digestion is diverted to the head. The result is discomfort, poor sleep, and fatigue. Another M.D. cited asserted that "The carrying home of school books at night should be forbidden by law." In England too, medical arguments were brought to bear against compulsory homework in elementary schools. A medical specialist in mental illness stated that he had

> encountered many remarkable instances of derangement of health, disease of the brain and even death resulting from enforced evening study in young children . . . (Gordon, 1980, p.31.)

Perhaps some of this strong rhetoric was a reaction against an earlier time when the notion of mind as muscle in need of constant exercise encouraged parents and teachers to insist on a very heavy daily dose. Thus, an early 19th century headmaster in England believed that mental efforts required supplementary exercises, "just as in the body, severe labour in one set of

muscles requires the other to be exercised, in order to restore the balance" (H. Thring, in Gordon, 1980, p. 20). And there were other pressures for heavy homework assignments in the 19th century as well. In England in the 1860s, after the introduction of public examinations for Oxford, Cambridge, and London University, schools had the burden of preparing pupils for university. Teachers were paid according to their pupils' examination scores. One can imagine what happened to the length of pupils' work days as a result. One commentator particularly regretted the burden for girls: "Physical exercise, social intercourse, the acquisition of womanly arts and accomplishments, all are sacrificed to the lessons that are to be prepared for the next day" (Gordon, 1980, p. 29).

This practice of paying teachers by students' examination scores applied at the elementary level as well, where annual examinations were set. Perhaps the most shocking statement on this state of affairs appeared in an anonymous letter from a teacher to The Schoolmaster in 1880: "Teachers labour for the reward of a good percentage, much as moths flutter round a candle. They know it is dangerous, but they persist in doing it. Need we wonder that they find their personal interest in their scholars decreasing and giving way to an interest which is simply pecuniary? I declare positively that when one of my backward boys died of bronchitis a few weeks back, I felt a measure of relief, for his death would make one 'failure' the less" (Gordon, 1980, pp. 29-30).

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In England, the sentiment against homework persisted until

after the second World War, although official policies were not always followed. Thus, the Board of Education's statement on homework in 1937 recommended that homework should not be given to children under 12, but did not remove the examinations which created the pressure for homework; and it was reported that homework was in fact being set in infant schools and often doubled by parents eager for their children to win scholarships.

In the United States, attitudes to homework in the twentieth century have been cyclical, with a feeling against homework being followed, after about ten years, with a renewed concern for achievement scores, and a renewed emphasis on homework. From 1930 to 1940, homework was not very popular. (See Strother, 1984.) But in 1957, the Russians launched Sputnik, and with it an era of growing concern about the mathematical and scientific training and skills of American students at all levels of study. Since then, there has been continued support for homework, and, since 1970 for more homework, culminating in the recommendation in A Nation at Risk (Gardner, 1983, p.29) that "Students in high schools should be assigned far more homework than is now the case". While homework at the elementary level is not discussed in that report, the general atmosphere which it both reflects and creates is one in which the lengthening of instructional time is looked on favourably at every level.

A recent article states that "In 1983 the amount of homework assigned in U.S. schools appears to be increasing once again. Whenever reformers attempt to improve the academic outcomes of American schooling, more homework seems to be one of the first

steps. The justification for this probably has more to do with philosophy . . . and with ease of implementation . . . than with new research findings" (Strother, 1984).

The issue is less clear in England at present. There is believed to be widespread variation among schools on homework policies and practices, but very little documentation. There are conflicting reports on how much homework British school children are presently being given and whether or not it is sufficient. But the position of the Department of Education and Science is not dissimilar from that which has become dominant in the United States. The DES is calling for more homework, with the comment that public schools lag behind many of the independent schools in this regard (Kirkman, 1985).

Between 1913 and 1986, the homework pendulum has swung far, and current thinking at any given point in time seems more influenced by culture and political philosophy than by new information. The range of homework policies current in any given time and place is very wide, from absolute prohibition before secondary school to hours every day for seven year olds. Recently, in the same month that the British government announced its intention to introduce a national policy calling for more homework (Kirkman, 1985), the Turkish government announced a ban on homework (Kennedy, 1985).

2. In Canada

The pendulum swing on homework in Canada parallels that in the other developed, English-speaking countries. The last policy statement on homework issued by the Ontario Ministry (then the Department) of Education appeared in 1937, and would not have displeased the editor of the Ladies' Home Journal of 1913. It reads:

> These children are at a period when vital energies are largely consumed in physical development, and consequently they must have time for rest and recreation. The school has no excuse for infringing upon the right of children to sufficient time for sleep and play and the right of the home to direct their activities outside of school hours. There can be no doubt that both of these rights are seriously encroached upon by the prescription of homework.... (Ontario Department of Education, 1937)

But by 1963, a survey of school superintendents across Canada showed that a majority favoured the assignment of homework beginning in Grade 4, and that most thought 30 minutes a day was appropriate at that grade level, increasing to one hour by Grade 7, one and a half hours by Grade 9, and two hours nightly by Grade 11 (Canadian Education Association, 1963). In 1966, the Toronto Board of Education proclaimed a homework policy almost identical to the one favoured across Canada in the 1963 survey. There was to be no homework before Grade 4; 30 minutes a day maximum in Grades 4 to 6; one hour maximum in Grades 7 and 8; and some homework every night, amount not specified, in secondary school.

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Since the mid-'60s, the homework policy issue has been raised several times by Toronto parents and trustees. The 1966

policy was reaffirmed in 1975. In 1979, the issue came to the Board again, with some parents and teachers wanting the proscription on homework in the primary grades removed. The result was a new policy which removed the 1975 guidelines and left the whole matter of how much homework at what age to the judgment of teachers and principals in consultation with individual parents. This new policy was reaffirmed in 1980, when the subject had again come to the Board. The 1979 policy specifies that teacher discretion should be the primary determinant of homework loads at the primary, junior and intermediate divisions; no mention is made of secondary.

Presently, calls for increased amounts and/or frequency of homework assignments seem to arise most often from parents and parent groups. At any given time, parent groups in many Toronto schools are involved in discussing homework policies, surveying their membership on their opinions about homework, and so on. At the time of writing, one senior school parents' group has just sent home a 26-item questionnaire on homework policy. Some of this activity has been stimulated by an initiative from the Curriculum Implementation Plan of the Toronto Board, which has made homework one of its principal concerns. The Plan proposes that each school design a homework policy in consultation with parents, and that this policy become a part of the school's curriculum plan. The proposal met with overwhelming support from teachers and parents. "There was substantial support for the view that homework should be an extension of the learning process, not simply busy work . . . [and] that individual academic differences and students' personal circumstances should

be taken into account in the assignment of homework" (Toronto Board of Education, 1986).

The remainder of this paper will be devoted to a review of the information available on the effectiveness of homework for increasing learning; the relative merits of various kinds of homework strategies and policies; and the significance of homework for home and school communications and relations.

THE EFFECTS OF HOMEWORK

1. On Achievement

There have been numerous reports since the beginning of the century on the relationships between homework and learning, as measured by tests, marks, and examinations. Reviews covering work done between 1900 and 1986 have appeared in the U.S. (Goldstein, 1960; Friesen, 1975; Austin, 1979; Knorr, 1981; La Conte, 1981 and Turvey, 1986) and Britain (Coulter, 1979, 1985). There appear to be no Canadian-based reviews of homework and achievement research and indeed very little research on homework and achievement done in Canada. (Exceptions are Lang, 1986; and Raphael, Wahlstrom and Wolfe, 1986.)

A careful reading of the review articles tends to create a mistrust of homework researchers. It appears that the conclusions they have reached are sometimes nearly independent of the data they collected. An example of this tendency (cited by Coulter, 1979, p.22) is the work of DiNapoli who, in 1937, found significant differences in achievement between homework and no homework groups at the Grade 5 level, in favor of the homework groups, and non-significant differences in the same direction at the Grade 7 level, and recommended, on the basis of these two pieces of data, the abolition of homework. Coulter cites other, similar examples, and concludes that:

> Early American studies. . .on the whole, tended to support the view that regularly assigned homework enhanced school achievement. However, the conclusions which researchers and others drew from the studies,

> although often unsupported by the actual data, offered no strong support for the retention of homework, and together with considerations relating to the problems experienced by children of low income families, this research contributed to the shift in America toward less homework. . .(1979, p. 23.)

The present situation, with respect to understanding the relationship between homework and learning, is not very different. It is worth quoting from a few statements, all published within the last two years, by reviewers who must have been reading the same studies -- though one might not guess it from the variability of their conclusions:

> Until recently, research on the effects of homework yielded inconclusive findings. But now findings reveal that homework improves achievement. . . .Even when the amount of homework students do is measured in very gross ways . . . homework seems to have beneficial effects on achievement. (Strother, 1984)

> The literature reviews done over the past 60 years . . . report conflicting results. There is no good evidence that homework produces better academic achievement. (Jongsma, 1985)

> More recent research. . .has offered clearer support for the view that there is a relationship between school achievement and certain kinds of regularly assigned homework. . .On balance, the findings support the view that homework contributes to school achievement. (Coulter, 1985)

> Does homework help students learn? Perhaps. Findings are inconclusive. (O'Donnell, 1985)

> Assignment of homework will not decrease achievement and will probably lead to greater student learning. (Raphael et al., 1986)

The last decade has seen a surge of interest in what is called time-on-task behaviour. Time-on-task is nothing more than the amount of classroom time students spend in learning. The relationship of learning time to achievement became of interest when researchers began to notice that time-on-task was more closely related to measured achievement than other seemingly

significant factors such as per pupil expenditure, class size, and method of instruction. Homework is an extension of time-on-task -- a way of increasing learning time beyond the constraints of the class period. Thus, one study found that Grade 7 students who were assigned homework completed two math units in 25 days, while the no-homework group took 33 days (Pendergrass, 1985). And a major educational report in Britain points out that "If pupils receive appropriate homework and do it on a regular basis over a five-year period, they will, in effect be receiving the equivalent to at least one additional year of full-time education" (Hargreaves, 1984, p. 50).

In 1975, data from twenty-one countries, gathered by the International Association for the Evaluation of Educational Achievement (IEA) indicated that:

> It is possible to accelerate the rate [of learning] but it is rather hard to do so. . . .The variables [which] can be regarded as descriptive of teaching. . .account for a modest proportion. . .of the variation in achievement, but few of them except the amount of study and homework stand out individually in many countries. (Peaker, 1975, p. 177)

In another analysis of the data from the American subset of the IEA sample, Wolf (1979) found that the best non-home related predictors of achievement were the amount of homework and the total amount of study, in and out of the classroom.

Michael Rutter and his colleagues state that "Several studies have shown modest, but positive associations between the time spent actively involved in particular subject work and attainments in these subjects . . . opportunities for pupil

practice and frequent teacher feedback both seem to help" (Rutter, Maugham, Mortimer and Ouston, with Smith, 1979, p.10). Rutter's work is one of the early and most influential reports on the relationship of homework to extended learning and higher achievement. The authors found that in many schools they observed in East London:

> The most obvious indication of a school's attitude to academic work is provided by its use of homework. . .the findings show that schools which set homework frequently and where there was some kind of check on whether staff did in fact set it, tended to have better outcomes than schools which made little use of homework. The relationship with outcome was evident with both pupils' behaviour in school . . . and with scholastic achievement. (Rutter et al., 1979, pp. 108-109)

The thrust of Fifteen Thousand Hours (Rutter et al., 1979) was the assertion that academic success is not wholly determined by family background and home variables; that malleable, school-based factors also have a very significant effect on learning. While Rutter has been criticized for minimizing home effects through coarseness of measurement techniques of family-related variables, such as socioeconomic status (see Heath & Clifford, 1980), his work nonetheless marks a turning point in the direction of research related to academic achievement. Since then, researchers have been giving much closer scrutiny to variables like time-on-task and homework, out of a belief that such factors are powerful and can help to overcome handicaps which are related to home background. Thus, in the United States, a study with similar impact to Rutter's was published by Coleman and his colleagues and stressed within-school and between-school differences, rather than home-related factors. High School Achievement (Coleman, Hoffer & Kilgore, 1982)

compared the records of over 58,000 students in public, catholic, and private secondary schools and had considerable political impact because of some of its findings in favour of non-public schools, vis-a-vis achievement. In comparing the schools with higher student achievement to those with lower measurable results, Coleman and his co-authors isolated several significant differences. The strongest was student behaviour (absenteeism, fighting, etc.), and the next most significant (though at a considerably lower level) was amount of homework.

Another study based on the Coleman et al. data set looked at 20,000 high school seniors. Keith (1982) found that the three most significant predictors of high school grades were ability, field of study (academic or general/vocational program), and time spent on homework. Race and family background, while related to ability, were not strongly and directly related to grades. Keith graphs the relationship between hours per week spent on homework and high school grades, and shows that for low, medium, and high ability students, an increase in time spent on homework has a similar elevating effect on grades, and points out that:

> With 1 to 3 hours of homework a week, the . . . low ability student can achieve grades commensurate with an average abiltiy student who does not do homework. (Keith, 1982, p. 251)

In a large-scale American study of achievement in science (measured by a section of the National Assessment in Science examination), the only variable more strongly associated with achievement than homework was race - but not ability, motivation, home environment, gender or number of science courses:

> Amount of homework (over all subjects) was a strong independent predictor so that an increase of one hour of homework per night was associated with an increase of . . . over one-third of a standard deviation . . . on the science achievement measure. In other words, a student at the 50th percentile could improve to the 65th percentile (a worthwhile improvement) through increasing homework by one hour per night. (Walberg et al., 1986, p. 137)

Of course, findings like Keith's and Walberg's remain theoretical rather than actual. That is, <u>if</u> students of relatively lower ability and/or achievement are able and willing to use more of their time in effective home study, <u>then</u> they will raise their achievement scores. Such a hypothetical result depends on individual motivation, which is not as easily altered by the teacher as is assignment of homework.

A very recent study of high school students in Ontario (King, 1986) found a moderate relationship between average mark and amount of homework done. This relationship was stronger for advanced level than general level courses, and for middle level rather than extremely high levels of homework, as the following chart indicates:

Homework per Week/Average mark

	<u>0 Hrs.</u>	<u>6-9 Hrs.</u>	<u>15-29 Hrs.</u>
General Level	63.2	66.5	68.6
Advanced Level	68.6	74.1	75.6

The author concludes that:

> ... it can safely be said to students "If you do more homework your marks will improve," but the difference in marks obtained as a result of the increase in time spent on homework may not be worth the extra effort required. Certainly an increase in homework done will probably not produce an equivalent increase in marks for those who already do an above-average amount of homework. (King, 1986, p.66)

While the Rutter, Coleman, Keith and King studies looked at

high school achievement of thousands of students across subjects, the majority of studies of homework and achievement are much smaller in scale, and most often look at achievement in certain topics in mathematics. A recent study of Grade 8 students in Ontario is an example. Raphael et al. (1986) found a significant relationship between amount of homework assigned and achievement in three out of five mathematics skills areas (geometry, algebra, and measurement, but not arithmetic or ratio/proportion). The authors acknowledge the importance of variables such as ability, but they remain impressed by the independent contribution of time spent on homework, a factor which can be manipulated by school policy and practice.

Summary

While some reviewers remain uncertain whether the weight of evidence supports a strong and significant relationship between time spent on homework and learning as measured by marks and examinations, the most influential studies of the last decade in England and the United States support that conclusion, at least at the secondary school level where all these studies were located. While the recent research is concentrated in secondary schools, at least one reviewer who distinguishes between pre- and post-1950 studies which cover both panels, concludes that the weight of evidence from studies done between 1960 and 1977 is in favour of homework for grades 4 through 10. (Austin, 1979). A Toronto study of grade 6 students (Schroder, Crawford & Wright, 1971) also found that among equally able children, high achievement was associated with doing more homework. But, especially in terms of sample size, the evidence from the

secondary level is considerably more impressive.

Some caveats about research on homework and achievement are in order. First, most homework research is based on student and teacher reports of past behaviour. Memory for past behaviours has been shown to be a very unreliable source.

Secondly, most studies are correlational, not experimental, and thus can indicate an association between reports of more homework and better marks, but cannot prove causation. Thus, statements such as the often-quoted "Female students and Asian Americans spend more time on homework and receive higher grades than males and other racial/ethnic groups" (Hurd, 1983) imply, but cannot be taken as evidence, that homework is the single or most significant source of variation in achievement scores.

Thirdly, the achievement scores which are the outcome measures in all these studies vary a great deal in content and quality, from simple end-of-unit tests to students' entire high school records. But it is probably fair to say that the studies which are published and reviewed most often use simple, objective tests of factual retention. While such instruments have many significant advantages, including replicability and comparability, they are poor measures of the higher-order conceptual skills for which schools and teachers frequently express concern. As a British researcher comments,

> Once the goals of teaching are extended so that they become concerned with understanding rather than simple retention of knowledge, then the practice effect of doing the task becomes of dubious value and

> [researchers] ... reporting on mathematics teaching ... question whether the skills of teaching associated with gains in knowledge and other lower cognitive outcomes are necessarily associated with gains in problem-solving, creative thinking and higher-level cognitive goals. So far much of the evidence from the United States on academic learning time only concerns fairly low-level outcomes. (Galton & Wilcocks, 1983, p.177)

Finally, while more homework is associated with higher achievement, there are very real constraints -- such as the number of out-of-school hours in the day -- on how much homework can be expected of students. Also, researchers point out that increasing homework does produce diminishing returns: that is, each additional hour of homework boosts achievement by a somewhat smaller factor than did the preceding hour. (See Keith and Page, 1985; King, 1986.)

2. On Attitude to Learning

A few researchers have looked for a relationship between homework and attitude toward subject matter. Some (Rutter et al., 1979; Austin, 1979) find no significant relationship. More recent research has found a positive relationship. Walberg et al. (1986) found such an association in the large sample of 17-year olds participating in the National Assessment of Science, in the United States. Among two thousand 17-year olds, the authors found that the amount of homework students did was more significantly related to attitude to science than any other variable, including ability, motivation, home environment, gender, race, and number of semesters of science taken in secondary school. Students who did more homework expressed more positive feelings about science study. Tamir (1985) found that

Israeli junior high school students who regularly do their science homework value that work; and researchers in Ontario found that, in a Grade 8 provincial sample, hours per week spent on math homework was the strongest unique predictor of students' liking for mathematical work and belief in its importance. (Raphael et al., 1986). While the direction of the association is unproven, it is likely that positive attitude to a subject precedes a willingness to do homework; but liking for a subject may also be strengthened through extended exposure to it.

HOMEWORK: THE QUANTITY ISSUE

How much homework should students of various ages be asked to do? Such a value-based question will be answered differently in different cultures. In Toronto, as we have seen, the last policy statement which made specific suggestions was that of 1966-1979.

Current law in France forbids homework in primary school, but reports are that over 70% of primary school children bring home work regularly (TES, 1982). In Russia, the Education Ministry prescribes one hour per night for 8-year olds (our Grade 3s); one and a half hours for 9-year olds (Grade 4); up to two hours for 10- and 11-year olds (Grades 5-6); up to two and a half hours for 12- and 13-year olds (Grades 7 and 8) and up to four hours per night in secondary school. However, "By the time they reach Grade 5, 12-year old Russian pupils in many schools have given up regular homework and tackle only the easiest tasks" (TES, 1982, p. 11). Clearly, what is prescribed and what occurs are different. It appears that our local expectations of elementary school children and homework load lie between the French on the low end, and the Russians on the high end, while our children's actual homework performance may lie between the Russian on the low end and the French on the high end. Australians appear to have similar patterns to Canadians for elementary students: no homework up to age 9; 30-45 minutes per night for 10- and 11-year olds; and one to one and a half hours per night for 12- and 13-year olds. The Japanese, however, give homework to 7- and 8-year olds which can total one to two hours

per night.

There is considerable cross-national comparative data on time spent on homework at the secondary level. Table 1 is based on several sources, all of them using data collected within the last few years.

It is clear from Table 1 that most of the Canadian figures are lower than others except those of Britain and the United States. In most European countries, students in their last year of secondary school do three to four hours of homework per school day, whereas in Britain, Canada and the U.S., they average under one to two hours per school day. Even in the case of grade 12 students in Ontario taking advanced level courses, the majority - 52% - are doing homework between 0 and 9 hours per week, although the 10 - 19 hour range represents the mode (encompassing 36% of the students, but 50% of the girls). It is true, however, that in many -- but not all -- European countries, the school day is shorter by about two hours giving an additional 10 hours per week for out-of-school work time (but less at-school time in the form of spares or study periods to do "homework.")

In Toronto, grade 12 students in advanced level programs average one hour of homework per school day, compared to one and a quarter hours for American Grade 12s in "high performance" public schools, and almost two hours per night in "high performance" private schools.

Table 1.* Time Spent on Homework in Secondary School in Various Countries

Country	Age or Grade	Avg. Hours per Day	Average or Modal Hours per Week
Australia	14- to 15-year olds	2	9
	17- to 18-year olds	3-4	12-20
Canada (Ontario)	Secondary, general level		2-5
	Secondary, advanced level		10-19
**Canada (Toronto)	Grade 9 and Grade 12		4
	Grade 9 and Grade 12, adv. level		3.7
Chile	17-year olds		8
Europe - 12 Countries	17-year olds		12
Germany (West)	17-year olds, adv. level	4	16-20
Ireland	15-year olds	2	8
	17- to 18-year olds	3-4	12-16
Netherlands	17-year olds, adv. level	3	12-15
Scotland	17-year olds		8
Sweden	17-year olds		8
***United Kingdom	17-year olds	35 mins. or less	1-3
United States	Grade 10		3.9
	Grade 10, high performance Public Schools		5.6
	Grade 10, high performance Private Schools		9.1
	Grade 12		3.7
	Grade 12, high performance Public Schools		5.7
	Grade 12, high performance Private Schools		9.5
U.S.S.R.	17-year olds	4	16

*Sources: For Australia, Germany, Ireland, Japan, Netherlands, and the U.S.S.R., TES, 1982; for Chile, Scotland Sweden, and "12 European countries", Wolf, 1979; for Ontario, King, 1986; for Toronto, Wright, 1985; for the U.S.A., Coleman et al., 1982

**See Table 2, p.23.

***These are the figures reported by Rutter et al. (1979). Brennan (1982) suggests much higher figures, but gives no averages, only the extremes. Kirkman (1985) mentions NFER research which finds relatively small gaps in homework time between British and EEC pupils, but cites no figures. Robertson (1980) finds 5 hours and 36 minutes to be the average weekly homework time in a British girls' secondary school.

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These figures suggest that secondary students in Toronto may be somewhat under-burdened with homework, by international standards, the only possible exception being Britain. A significant amount of time gained by the British and North American students may be devoted to TV watching: Coleman found that the lesser time being spent on homework by the average American public school student (compared to students in "high performance" schools) was marked by a greater amount of time spent on television, suggesting that more time is available for homework than is being used in most cases. Walberg (1984, p. 399) uses Coleman's data to show that American high school students average four hours of homework and 30 hours of television per week, during the school year; and a one-week experiment in a Grade 9 class in Ohio found that students who watched no television for a week averaged 74 minutes a night of homework time, compared to ten minutes a night for TV-watchers. (Education Week, 1984.)

But a recent Ontario study found little relationship between television and homework time. "Even those who watch more than 30 hours of television per week show patterns of homework hours similar to those who watch two hours a week or less." (King, 1986, p.83)

Several surveys have found that students consistently report their homework time to be higher than teachers' estimates. Raphael et al. (1986) are typical, in reporting that Grade 8 students in Ontario say they are doing two to three hours of mathematics homework per week, while their teachers claim to be

assigning one to two hours per week. A study in another part of Canada, in which the time spent on homework was not quantified, found over 1,000 secondary students in Newfoundland divided as to whether or not they were assigned too much, too little, or a reasonable amount of homework. (Martin, 1980.) The author observes that for some students, the assigned homework seems excessive because of either lack of interest in school or strong competing interests, while other students experience the frustration of trying but being unable to complete the assignments in the time alloted. Many students also voiced the need for homework time tables, where teachers have agreed in advance on the nights on which they assign work, so that it is better distributed (Martin, 1981; Baksch and Martin, 1986).

The notion that students do not do more homework because of competing interests is contradicted by data gathered recently in Ontario (King, 1986). That study found that the students who do the least amount of homework are also the least likely to be participating in extra-curricular affairs. The average marks of students who participate in both athletic and non-athletic activities are higher than non-participants. It is also true that students who work part-time (up to 14 hours per week) are more likely to participate in extra-curricular activities and do just as well, achievement-wise, as those who do no part-time work. It is only the students who work 15 hours per week or more who participate less, and whose marks are lower. About 20% of the Ontario sample worked 15 hours per week or more. In Toronto, the percentage is 9% of grade 9's and 25% of grade 12's, with students in General level programs most likely, and those in

Advanced level programs least likely to work that much. See Wright, 1985, p.39.

The amount of homework assigned varies by the ability level or stream of the students. The more advanced the students, in terms of placement, the more homework they are assigned, and the more homework they do. Thus, a recent survey in New York City and Connecticut found that:

> When class and homework time were totalled, students of high ability spent half again as much time on language arts as did their less-able classmates. . . High school classes geared to less successful students demand little outside work . . . (Norris, 1985.)

Similarly, recent surveys of Ontario and Toronto high school students reveal that those in advanced level courses do the most homework, and those in basic level do the least. (See Table 2 for Toronto data.) The Ontario data also show that girls do substantially more hours of homework (and have substantially higher average marks) than do boys (King, 1986). (Hours of part-time work per week are <u>not</u> significantly greater for students in basic level programs in Ontario or Toronto; no data on part-time work by sex is available.)

There is considerable evidence that teachers assign more homework to students in high ability streams than to students in middle and low ability streams. While students in higher academic streams may be more accustomed and willing to do more

Table 2.* Percentage of Grades 9 and 12 Toronto Students, by Grade and Level of Study, Who Do Homework

Weekly Amount of Homework	Grade 9 Advanced %	General %	Basic %	Total** %
Little or None	8.8	28.1	54.3	18.3
1 - 2 Hours	22.6	36.6	30.2	27.0
3 - 4 Hours	23.2	15.4	9.0	19.8
5 - 7 Hours	23.5	12.1	4.2	18.6
8 - 10 Hours	13.3	5.2	1.5	10.0
Over 10 Hours	8.6	2.6	0.9	6.4
TOTAL***	100.0	100.0	100.1	100.1
NUMBER OF STUDENTS	2,989	1,065	457	4,659

Weekly Amount of Homework	Grade 12 Advanced %	General %	Basic %	Total** %
Little or None	11.7	27.5	49.3	18.2
1 -2 Hours	18.4	30.2	34.3	22.6
3 -4 Hours	21.6	19.5	10.0	20.4
5 - 7 Hours	20.6	12.6	4.0	17.2
8 - 10 Hours	14.6	6.0	0.5	11.5
Over 10 Hours	13.1	4.3	2.0	10.2
TOTAL***	100.0	100.1	100.1	100.1
NUMBER OF STUDENTS	2,084	739	201	3,109

*Source: Wright, 1985; this is student self-report data.

**Includes "Don't Know".

***May not equal 100.0% because of rounding.

homework, many educators suggest that "if schools could convince low-achievers and their teachers of the value of homework . . . they would take a step towards equalizing opportunity" (Norris, 1985). Another English researcher reports that:

> Low achieving groups in secondary school were set little or no homework because teachers believed that they did not possess the skills or motivation to work independently, and that they would learn their less demanding curriculum during the school day. This attitude toward low achievers contrasted sharply with the expectations of parents who considered that low achievers were the very children who needed this, and by assigning homework only to high achievers, teachers widened the difference between high and low achievers. (See Coulter, 1985, p. 2290.)

HOMEWORK: THE QUALITY ISSUE

What makes a good, or an optimal homework assignment? Such an assignment can be operationally defined as one which fosters achievement and at the same time does not have a negative effect on attitude toward school in general or the subject matter in particular. It must also be an assignment which has an excellent chance of being completed by the student. There are several aspects to the question of quality of homework assignment. These include:

(1) The type of learning experience involved;
(2) The kind of feedback/reinforcement given;
(3) The fit between learner and assignment;
(4) The degree of independence/supervision expected.

1. Homework Types and Typologies

An often-cited taxonomy of homework includes four kinds of assignment: practice, preparation, extension, and creative (Lee & Pruitt, 1979). Practice, for skill mastery, is the commonest and simplest type of assignment. A major problem of practice assignments is that pupils may practice errors. To avoid this, teachers can have pupils begin the assignment in class, so they can check pupils' papers for errors, and correct misunderstandings before the pupils go home with the assignment. Also, because practice assignments can easily be copied by one pupil from another, quizzes or some other form of evaluation of mastery is necessary. (20% of 215 Grade 7, 8 and 9 students

surveyed in a comprehensive secondary school in Jerusalem reported that they sometimes copy friends' homework; Tamir, 1985, p. 612.)

Studies of "massed" versus distributed assignments all support the idea that practice work should be spaced over time, and interspersed with previously learned material, rather than "massed". In other words, rather than twenty problems reviewing a just-taught topic such as long division, a better practice is five such problems today, along with five reviewing short division; and another five problems on long division next week plus five on a new topic, and so on. Revision exercises spaced over time appear to be more beneficial for all students, but particularly for those of middle and lower ability levels. (See Coulter, 1979, p. 26.)

Preparation assignments are to prepare students for the next class meeting. Studies indicate that achievement may be enhanced by exploratory exercises which provide a basis for new classwork. An important caveat regarding such assignments is that they must be followed up on in class. Thus, if students are told to read several pages, but the teacher reiterates that material the next day in class, instead of going on from it, students who did the assignment will be punished by boredom, and those who didn't prepare will get the information anyway, and hence be rewarded for not having done it ahead. If used properly, such assignments can have the effect of creating more class time for participation and discussion, extending time-on-task, and preparing students to gain maximum benefit from the subsequent lesson. (See Coulter,

1979, p. 26.)

Extension and creative assignments require more abstract reasoning and skill and concept integration than practice or preparation assignments. They may take much longer to complete, and may involve work which is impossible to do within the confines of a school. Such assignments can increase the reality component of an assignment. "In limited ways you can bring some home and community resources into a classroom, but well-planned homework can fully immerse the student into a 'real' situation" (Pendergrass, 1985).

One example is an outdoor biology project at the senior level (described by Tamir, 1985) in which 80 to 90 per cent of the project time was spent outside class, without the teacher present. Students had a full year to work on the project, at the end of which they submitted written reports and were examined orally by an outside examiner. While such projects can be very rewarding, they tend to be very demanding on teachers' as well as students' out-of-classroom time. Even assignments done over much shorter periods, such as a few weeks, can create more written work than teachers can thoroughly examine and evaluate. However, a study of homework preferences found projects to be a favorite of children in Grade 6, as well as their teachers.

2. Feedback: The Issue of Teacher Evaluation of Homework

The felt necessity of having to check and mark homework often affects the quantity and kind of assignments teachers make. The results of research on the importance and effectiveness of teacher feedback on homework assignments are mixed. Austin (1979) reviews studies which conclude that teachers' comments on homework can improve student achievement, but that marking every other problem is as effective as marking them all. Walberg, however, concludes from his review of homework research that graded homework has a much stronger effect than ungraded homework on student achievement (Walberg et al., 1985). Researchers believe that more and better studies of the effects of various forms of feedback on achievement are needed, but caution that a basic principle of behaviour is that learning requires reinforcement, and that teacher feedback is a form of reinforcement. One study found that students are more likely to accept and be committed to completing homework assignments when teachers check their work regularly (Tamir, 1985). As one writer puts it, "This argument doesn't hold that each problem, or task, must be reinforced but that, as a guiding principle, the teacher respect the concept that if something is reinforced, it is strengthened, and if it is not reinforced, it is extinguished" (Pendergrass, 1985, p. 312). One suggestion is that teachers record whether assignments are submitted or not, but that they check only a few, randomly selected papers (Lee & Pratt, 1979). The authors also suggest that the purpose of the assignment (mastery, preparation, extension, etc.) be clearly communicated to the students. One mispurpose to which homework is sometimes

put is punishment (writing lines, doing extra problems, etc.). In a survey, Canadian students suggested that such a tactic may create a negative attitude to homework in general, and have consequences for future motivation and performance (Martin et al., 1980).

3. Individualization

Earlier, we mentioned studies which find very substantial differences in the amount of time absorbed by the same homework assignment for different students. This has been found not only in reading and composition, but even in drawing a simple science diagram, where the time varied between ten and thirty minutes. (See Brennan, 1982; Coulter, 1985; Norris, 1985.) Such findings point to the need for individualization, or at least grouping, in the design of homework assignments. It has been found that teachers generally ignore individual differences when making homework assignments, and feel they do not have time to tailor assignments to individuals (Richards, 1982; Featherstone, 1985; Norris, 1985). One solution to this problem is to give project-type assignments, where students have some choice over topic, depth of treatment, and so on. Students prefer joint planning of assignments, and can have more input into the design of project assignments. A survey of a group of exemplary teachers found they provide for individual differences by giving optional assignments frequently, and also by letting students choose among several alternative approaches to a topic (Featherstone, 1985).

Another expression of the concern for individualization crops up most often in British publications, where teachers are reported to feel unable to assign homework which is suitable to the range of ability represented in classes which are more heterogeneous than heretofore (Beattie, 1978; Brennan, 1982; Hargreaves, 1984).

The conflict between large and heterogeneous class groups on the one hand, and individual differences in learning style and speed on the other, is as central to the issue of good homework practices as it is to good classroom practices, and just as difficult to resolve. While project-type assignments can encompass such individual variation, it is practice assignments, which are uniform for a whole class, which are most common. In a survey of secondary schools in Britain, the evaluators found that "finishing class work" was the dominant mode, and found little evidence of homework used for exploring or for reflective writing (Robertson, 1980), both of which lend themselves to individualization. The only "advantage" in the homework (versus the classroom) situation is that the time period is less constrained -- but whether this is in fact an advantage for the slower student whose entire evening may be consumed by homework might be differently answered by the student and the educator. At least one reviewer cautions that most recent research looking at achievement (usually in mathematics) and homework, finds that while doing homework is advantageous to most students, "the relationships (between homework and achievement) have generally been stronger and more consistent for high achievers" (Coulter, 1985, p. 2290). Thus, while slower learners may need to do more

homework, it clearly takes them longer, and the payoff, while appreciable, may be less than what it is for faster learners.

4. Supervision

An often-stated goal of homework is to give students practice in independently organizing their learning -- as they will have to do as adults. But the achievement of this goal is never evaluated, leading one to wonder how seriously it is adhered to. We simply have no evidence whether children who do more homework have better independent learning skills than children who do less homework. Presumably, project-type assignments which call for self-organization and decision-making about direction, content, and organization would be more productive of independent learning skills than teacher-designed or workbook-designed practice assignments, but no studies have been done to test this hypothesis.

The flip side on independent work is the concern that it will unfairly burden and punish the student whose study skills or whose home environment are unable to give him/her adequate support. In fact, much of the philosophical opposition to homework which prevailed in the first half of this century cited the disadvantaged position of children of less well-educated and less affluent parents who would be unable to provide the intellectual support as well as optimal physical conditions for home study. Probably because this objection was only one of several grounds for disapproving of homework, it did not became the basis for exploration of alternative forms of

out-of-classroom study, as it might have done. There is almost no research literature on the merits of supervised study, as in school study halls, vis-a-vis school achievement or attitudes to school work. One study which is an exception (Blumenfeld and Remmers, 1966) found that, in a large, random sample of American high school students at schools which had study halls, the majority of students said that they did their serious study at home, not at school; that more homework per day was done at home than in study hall; and that the students who got better grades were those who spent less time in study hall and more time doing work at home. Better students were less likely to have positive attitudes to study hall. However, the authors caution that "to the extent that study hall was employed as a form of administrative punishment in the schools of the sample, the data in this report are misleading" (p.408). Unfortunately, they apparently have no information on how widespread that practice may have been, and we are left in the dark about the significance of their data. It is partly supported, however, by a study which found that higher ability students appeared to benefit more from homework, and lower ability students achieved better with supervised study. (See Coulter, 1979, p. 25.)

Supervised study was popular in the early part of the century in the United States as a cure for increasing numbers of school failures. The idea was that children would be taught how to study. For various reasons, the treatment didn't solve the problem, and supervised study and study periods and study halls became less emphasized after the mid 1930s. (See Burton, 1950.) But in Toronto in the '60s, several community centres offered

after-school study halls where adult volunteers helped children with their work as needed, and monitored the room to maintain quiet and order. There were several of these -- at community centres, settlement houses, and boys' clubs, and they were well-attended, but suffered from a short supply of adult volunteers. (See Rex, 1965.) A similar program in New York City during the same time period was housed in schools, and paid high school students at modest hourly rates to assist children in grades 4-6 in after-school study periods. They served thousands of children on a regular basis, but ran into financial difficulties in paying the 1500 tutors who staffed the program by 1969.

Currently, the Hargreaves report in Britain suggests that supervised study be made available by schools as one of a range of after-school activities in an extended day program. For the many Toronto schools with extended day programs (day care, after 4s), supervised study might be considered as an option.

Whether supervised study at school is superior to home study must depend on the amount of supervision needed (in terms of the student) and the amount and quality of help provided, compared to what is available at home. But study periods at school, even if they involve minimal supervision and no tutoring, can have the effect of lengthening the amount of time students spend on homework. If the study period is the alternative to an hour of "hanging out", or of watching afternoon television, it may have a salutory effect on school achievement. In a survey of high school students in Newfoundland, some students suggested that

they would like to see more school time set aside for doing what is now done at home -- such as two or three periods per week (Martin, 1981).

Study hall has sometimes been seen as a necessary alternative to work done at home for students whose parents are educationally disadvantaged or who, for other reasons, are unable to provide assistance and a supportive environment for doing homework.

> Those against homework argue that supervised study is superior to homework since each student has an equal opportunity to get adequate assistance. This latter point is especially important for weaker students who may make mistakes while doing homework, thereby reinforcing the very responses that should be avoided. (See Richards, 1982, p. 834.)

However, many studies indicate that varying kinds of interventive support can be offered which aid families in assisting their children in their learning at home, and which improve the continuity and consistency between home and school as a continuous learning environment.

HOME AND HOMEWORK

"Possibly the most powerful argument for homework is not directly pedagogical. It is, simply put, that student, parents, and teachers expect homework assignments" (Pendergrass, 1985, p. 310). Further, while students, parents and teachers expect it, it tends to be parents who ask for more homework. Parents tend to think less of teachers who don't assign homework (O'Donnell, 1985) and to see the regular assignment and marking of homework as evidence of the teacher's dedication to her/his task and seriousness about the students' work. As Rutter and his colleagues state,

> It may well be that in addition to its practical value in providing opportunities for the consolidation of the learning of work introduced in school time, homework may also be of symbolic importance in emphasizing the school's concern for academic progress, and its expectation that pupils have the ability and self-discipline needed to work without direct supervision (Rutter et al., 1979, p. 110).

For parents, homework is "a window on their children's schoolwork" (Featherstone, 1985, p. 7); assignments "tell parents what the school teaches and how well their child copes with its demands" (ibid); homework is "central to the school's outreach to the community" (Beattie, 1978, p. 195); and it is "sometimes the only form of serious communication about school and learning between parents and their school-aged children (O'Donnell, 1985, p. 221).

Because homework is very often the only view of what happens in school for that majority of parents who otherwise would only see their children's work once or twice a year on parents' night,

it becomes the basis on which they judge the school's program and teaching staff. Judgements about seriousness of purpose of the school, appropriateness of level of difficulty of the curriculum, correctness of teachers' expectations of the student -- all these are made on the basis of homework assignments, which thus become, unwittingly, a major instrument in a public relations campaign schools may be quite unconscious of waging. If schools and teachers do not self-consciously examine their homework policies and assignments, they may find themselves frequently faced by dissatisfied parents who want more, less, or different homework assignments.

Homework need not be the only kind of home-based learning intervention. Parents are a powerful factor in their children's school achievement, and their effect has been found to be malleable. As some researchers have pointed out, it is not socioeconomic status of parents which directly impacts on children's achievement; rather it is variables in the home environment, such as amount and attitude to reading, quality of dinner table discussion, parental expression of interest in school, positive reinforcement for academic effort -- variables which are correlated with SES, but, unlike it, can be changed. Studies in eighteen countries including Canada find that students' intelligence, motivation, and achievement is much more closely tied to indices of parental stimulation of the student at home than to socioeconomic status. (See Iverson and Walberg, 1982.) Similarly, a study in Toronto found that socioeconomic status was of "no utility" in predicting performance of grade one children on a standardized test of achievement, while two home

environment variables (parents' anticipated education for the child, and number of books in the home suitable for the child) were "useful" predictors of achievement, along with I.Q. scores. (Crawford and Eason, 1970.)

There are many examples in the literature of successful home intervention, usually consisting of some kind of formal or informal, brief or lengthy, training for parents around parent-child interaction. Reviewers cite positive effects of 29 home intervention programs implemented over the past decade. The reviewers state that:

> The main conclusion of the present synthesis is that school-based home-instruction programs are consistently favourable and have, on average, large effects on children's academic learning . . . teachers with special training, and programs with special facilities appear to produce stronger effects (Graue, Weinstein and Walberg, 1983, p. 359).

A few examples of such school-based home instruction programs follow.

Graue et al. describe two interesting and successful home-based or home-and-school-based interventions which worked with minority group samples. The first involved 20 Native American mothers of children in Grade 2. They were trained, in five sessions using modeling and and role-playing, to use social learning principles (e.g. positive support and reinforcement) to influence their child's choice of reading materials over non-reading materials in free choice situations at home. Later, their children proved more likely than comparable others to choose reading over other activities in the classroom, after the

training of the mothers.

A dramatic example of the effectiveness of a parent intervention (which required no training) comes from Britain, from a multi-ethnic London borough, (cited by Cummins, 1986, pp. 26-27). Primary children read to their parents at home on a regular basis. Even though many parents in the area do not read English or use it at home, almost all were able and willing to listen to their children read, and completed a record card showing what had been read. The children's reading progress was compared to that of similar children "who were given extra reading instruction in small groups by an experienced and qualified teacher who worked with them four half days . . . every week for the two years of the intervention" (p. 26). The children who read to their parents made significantly greater progress than those who had small-group instruction with a reading specialist.

A program in a depressed, American inner-city was initiated by Black parents and school staff. Over 800 children in Grades 1 to 6 were involved. The goals included "increasing parents' desire to aid children, acquainting them more thoroughly with their children's school progress, especially in reading, and developing home activities for parents and children to increase reading achievement" (Graue et al., 1983, p. 353). Superintendent, teacher, parents and child signed a mutual contract stating their roles. Children's reading progress in the program over a year was comparable to that of White, middle-class schools. (See Walberg, Bole and Waxman, 1980.)

Some reviewers caution that many such programs may selectively attract the already effective families, and thus the results may not generalize to a random sample of the population. Other reviewers suggest that compensatory programs involving parents were not strongly and consistently predictive of achievement, but did strongly predict the development of positive attitudes toward reading and reading instruction (McDermott, Goldman and Varenne, 1984).

These caveats notwithstanding, several well-designed studies, such as the British one described above, do find powerful effects on achievement from very simple, very cost-efficient home interventions.

Simple and practical home-teaching projects include sending home "recipes" for parents and children to do together, such as dialing and reading telephone numbers, using the TV schedule to keep to time limits, and using maps to plan family trips. "The hurried parent, in just a few minutes a day, can teach science, reading, math or writing in a relaxed, informal manner. The material is presented in such a way that parents know exactly what to do." (Rich, 1985, p. 80.) These techniques have been found to increase achievement and school attitudes. They are an interesting alternative, for younger children particularly, to the more traditional assignment of schoolwork at home; another, and perhaps less conflict-fraught way of involving parents in their children's education.

Another kind of support to homework, although one that may

bypass the parent, is the homework hot-line. This exists in many North American cities, including Buffalo, Mississauga and Vancouver. Homework hot-lines typically operate about three or four hours per evening (e.g., 5-8 p.m. or 6-9 p.m.), four nights per week (Monday-Thursday). They are staffed most often by teachers who are paid by the hour, but sometimes by volunteers. The operator is sometimes a private, for-profit entrepreneur, as in Mississauga (Brown, 1984) and Vancouver (Gory, 1985), with charges of about $65-$85 per year per family, or the school board. In Philadelphia, the Board of Education has a federal grant to fund the hot-line. In a small town in California, it is staffed by teacher-volunteers. In a Florida school system with over 99,000 students, the program is jointly sponsored by the school system (through its Community Education Department) and the local university (Wood, 1986). The teachers who answer calls are enrolled in a graduate course at the university. They are trained and supervised, and earn three hours credit. In the Florida instance, where the service has been available since 1981, an analysis of their calls indicates that 61% of the calls concern math, about equally divided between elementary and secondary math; 21% of calls concern English, language arts and reading, twice as many at the elementary as the secondary level. More than half the total calls are from students in Grades 4 through 7. About 130 calls are received per night. 95% of these are successfully assisted, and 5% are referred to other resources. While such programs can, in theory, bypass parents, they do not necessarily do so. The Florida hot-line is apparently used by parents and children together with some frequency.

There is no research which indicates how best to motivate unmotivated students to do homework, beyond such basic notions as giving them clear directions, making the assignment meaningful, and reinforcing effort with quick and, whenever possible, positive feedback. Similarly, there is no information on how best to involve parents as facilitators to the homework process if they do not wish to be involved. Doubtless there are such students and such parents. But it is clear that the majority of parents, like their children, recognize the legitimacy of homework as part of the educational process, and are open to and welcoming of direction and assistance which will promote their children's academic success.

THE NEED FOR A HOMEWORK POLICY

American surveys of homework policies reveal that most school districts have no homework policy (Turvey, 1986). A Canadian survey in 1963 found that homework policies ranging from the very general to the more specific existed in 45 out of the 65 school systems which responded (CEA, 1963).

Toronto has a homework policy, which states:

> That homework in the primary, junior, and intermediate divisions be at the discretion of the individual teacher in consultation with the principal and, as much as possible, with the individual parent.

No statement is made about the senior division. The policy encourages homework given "as a follow-up to topics taken in school" as being the most beneficial, which might include "wide reading, research and special activities inspired by discussions in the classroom. . ." (see Toronto Board of Education, Minutes, June 12, 1980, pp. 602-603). This policy was found, in 1980, to be well-accepted by teachers and principals.

Many writers emphasize the importance of involving parents in the formulation of homework policies. While this may be awkward at the system level, it is not unwieldy at the school level. It is possible for a committee of staff and parents (and, at least in the intermediate and senior divisions, students as well) to take on the task of defining a homework policy for their school.

In the American surveys on homework policy, it was found that there was usually a discrepancy between the teacher view and the parent view about the purpose and nature of homework assignments. One large-scale survey found that, while both teachers and parents think homework valuable, they value different kinds of homework. Parents saw it as related to exam performance and grade promotion, while teachers saw it as valuable for developing organizational skills and learning to use local resources. Such differences in objectives, if not mutually understood, can result in community dissatisfaction:

> Parents seemed to have very particular views of the kinds of assignments they thought their children should be given. These opinions of parents are particularly important to note because they provide clues about the ways in which family life can accommodate the school and the ways in which parents see themselves participating in school-related learning activites. (McDermott et al., 1984, p. 395.)

This suggests that consultation with an appropriate parents' group should be an intrinsic part, not merely a desirable add-on, to a school-wide homework policy. A recent survey of 15 (mostly inner-city) Toronto elementary schools in areas of high ethnic diversity revealed that while 78% of the 131 teachers responding were satisfied with the present homework situation, only 42% of the 449 parents surveyed were. A majority of parents (54%) thought more homework would be an improvement. Only 15% of teachers thought so (Larter and Cheng, forthcoming).

Clearly, parents' voices may be different than teachers' and deserve careful consideration. Amount of homework and its frequency and scheduling (a homework time table) are all of strong interest to parents.

Surveys of homework policies in both the United States and Britain have found a woeful lack of individualization in homework. The suggestion is made over and over in the literature that it is insufficient to give everyone the same assignment, regardless of ability and prior achievement. Coupled with so many parents' desire for more homework, this suggests that a school staff may want to consider, in addition to the amount and frequency of homework, ways to individualize or at least group assignments.

Another issue which can be addressed in a homework policy is the issue of grading or marking. Do teachers believe all papers should be marked, or only some? Do they believe that all/some/no assignments should be signed by parents? What about reading assignments, which have been found to play a more significant role in homework than classwork (Lunzer and Gardner, 1979)? Is this a bad practice for children below a certain age? How can teachers be certain pupils understand an assignment before they begin it? Should all practice assignments be begun in class and checked?

In Montreal, a two-step plan for evoking responses to such questions has been carefully worked out (DeSerres, 1980). First, a panel of two parents, two teachers and two students speaks to a parent-teacher-student audience for 3 minutes each, covering several questions which they have had opportunity to consider beforehand. After the presentation, members of the audience may ask them questions or for clarification, and may participate in a discussion. Then, at a later date, teachers come to a half-day

workshop, with the intention of establishing a policy on homework. They have previously filled out a questionnaire, as have all their pupils, and their discussion begins with the results of these polls, comparing them for similarities and differences, and discussing the differences. The Montreal plan begins at the system level, but could as easily be implemented at the individual school, with a similar panel-debate and workshop type of format. A similar sequence is described by Foyle (1986).

The Hargreaves Report from London (1984) suggests that the most successful homework policies are those which are made clear to pupils and parents from the time pupils apply or register at the school.

> Parents and pupils know that homework is to be insisted on, there is a clear homework timetable; homework is regularly planned, set and marked, and there is a regular monitoring of the practice of this policy by heads of departments, tutors, and senior management (Hargreaves, 1984, p. 50).

SUMMARY AND CONCLUSIONS

The most often asked question about homework is: does it increase academic achievement? Unevenness of quality in the many studies done in this century, as well as a tendency to allow political and social mood to distort scientific findings makes this a more complicated question than it might seem to be. The best answer, in 1986, is that recent, large-scale correlational studies at the secondary level suggest a strong, positive relationship between amount of homework and academic achievement. Results are less clear at the elementary level, where fewer larger scale studies have been done, but the weight of evidence is positive.

Doing homework is associated with pupils' liking for the subject, at both elementary and secondary levels.

Whether most students in Toronto ought to be doing more homework is not a question which a literature survey can answer. Comparative figures indicate that, at the secondary level, Toronto students are doing fewer hours/minutes of homework per week than are students in most other countries.

Surveys done in the United States suggest that most homework assignments are of a practice variety. Some educators suggest that more varied assignments, including those which extend and create, are desirable. As well, practice assignments tend not to be individualized, which is seen as a significant weakness of homework assignments generally.

Supervised study at school or elsewhere is an alternative to unsupervised home study, and may be seen as an optional or compulsory extension of the school day which helps to equalize opportunity in a way that home study may not. There is very little summative research on the effectiveness of study hall, but one would expect that it would be at least as effective as the same number of minutes of home study, so long as order and quiet are maintained. Other options which have been positively evaluated include homework hot-lines and parent training programs.

Because homework is often the only access that parents have to their children's program, it is important that they understand and appreciate the school's and the teacher's policies on homework. Because parents can play such a powerful role in influencing their children's progress in school, educators need to recognize parental involvement, whether in homework on in other school-guided home-based informal learning, as the powerful tool that it can be in advancing children's readiness and ability to learn, especially in the area of reading.

Surveys, including a recent one in Toronto, indicate that many parents want to see more homework given to their children. Because many parents have strong opinions on homework, and because their opinions may differ, to some degree, from those of teachers, it is important that schools involve parents and teachers together in the formulation of homework policies which are clearly understood, and in which parents and teachers are aware of their respective responsibilities in support of

students' out-of-classroom work.

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